

CBO TESTIMONY

Statement of
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on the
Comprehensive Environmental Response,
Compensation, and Liability Act of 1980

before the
Subcommittee on Water Resources and
Environment
Committee on Transportation and Infrastructure
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CONGRESSIONAL BUDGET OFFICE
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Mr. Chairman and Members of the Subcommittee, I am pleased on behalf of the Congressional Budget Office (CBO) to participate in your review of the Superfund program. As requested, my testimony today will focus on the likely effects of establishing a cutoff date for Superfund liability. I will also discuss the current distribution of spending within the federal Superfund budget and the consequences of not reauthorizing the program's dedicated taxes.

Liability under the Superfund law currently is retroactive; that is, "potentially responsible parties" (PRPs) are held liable for cleanup regardless of when sites were contaminated with hazardous substances. Some proposals would relieve parties of liability for actions occurring before December 1980, when the Congress enacted the original statute; other proposals call for a release from liability or pre-1987 actions. Proponents of a cutoff date for liability want to eliminate the perceived unfairness of retroactivity and to reduce or eliminate the "transaction costs" of funding cleanup through a liability-based system. Reducing transaction costs would increase efficiency for the nation as a whole. The main trade-off inherent in having a cutoff date for liability is that it shifts the responsibility for cleanup from the PRPs to the federal government. In so doing, it requires some mix of cost savings, increased federal spending, and reductions in the pace of cleanup.

The potential impacts are large. CBO estimates that repealing liability for pre-1987 actions, as proposed by groups such as Superfund Reform '95, could eliminate or shift \$2.4 billion per year in private costs while adding \$1.6 billion per year to the

federal government's burden for cleanup. The government faces an additional one-time cost of as much as \$6 billion if the new policy allows PRPs to claim reimbursement for costs they have already incurred under the old system. Other combinations of policies reduce both the savings to the private sector and the increase in the federal cleanup burden.

All groups trying to analyze the likely effects of a cutoff date for liability, CBO included, must grapple with a shortage of data on the current level of PRP cleanup spending, transaction costs to PRPs and insurers, and the significance of illegal actions in causing the contamination problems at Superfund sites. Accordingly, CBO's analysis should be regarded as preliminary at this point. Our analysis assumes that final PRP cleanup spending will be 50 percent higher than reported in the Environmental Protection Agency's (EPA's) estimates. We made that assumption on the basis of information from EPA that its own cleanups end up costing an average of 50 percent more than originally estimated, in part because additional contamination is discovered as the cleanup proceeds.

Some people have challenged our analysis on the grounds that the assumed 50 percent growth in costs may not accurately reflect the experience of the PRPs or may already be captured in the available data on the dollar value of PRP settlements. The evidence we have obtained so far has not led us to modify our analysis, but we continue to gather information from EPA and other sources to assess its

appropriateness. Even if additional information does cause us to reduce our estimate of PRP spending on cleanup, our estimate of PRP and insurer transaction costs would almost certainly fall as well, leaving the proportions of benefits and costs from a liability cutoff largely unchanged.

The main conclusions of our analysis to date are as follows:

- o Repealing liability for pre-1987 actions could save the nation as much as \$1.1 billion annually in transaction costs if little investigation or litigation occurs over the legality of past actions. Most of those savings would accrue to the private sector, however, and the net increase in the federal cleanup burden would build up over a handful of years to the \$1.6 billion per year already mentioned. Reimbursing PRPs for their ongoing expenses under existing cleanup commitments would create that increased burden of \$1.6 billion per year right away; the loss of the "grace period" would add \$7.5 billion to cumulative federal costs. Moreover, reimbursing PRPs for past costs as well could add a one-time cost of \$6 billion.
- o An alternative cutoff date of December 31, 1980, would be somewhat less costly in terms of the increase in demands on federal cleanup resources, but it would also be less effective in reducing transaction

costs. Again assuming that illegal activity was a relatively minor cause of the contamination at Superfund sites, the shift in the responsibility for cleanup would mount up to \$1.3 billion per year, and transaction costs would fall by \$500 million to \$600 million per year. Cumulative federal costs for reimbursing PRPs could total \$5.5 billion for ongoing cleanup work and \$4.4 billion for past work.

- o EPA data suggest that illegal activities may have played some role at one-third to one-half of nonfederal Superfund sites. If PRPs remain significantly exposed to liability at a considerable fraction of sites because their behavior is thought to have been illegal, the savings in transaction costs could be greatly reduced or even eliminated.

THE PRESENT LIABILITY SYSTEM

In enacting the Superfund law, formally the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Congress took a two-pronged approach to the problem of who should pay for cleaning up sites contaminated with hazardous wastes or other substances. The law imposed cleanup liability on a site's present owners and operators, its previous owners and operators from periods during which it received hazardous substances, the generators of such substances, and any

waste transporters responsible for choosing the site. It also established the Superfund trust fund to finance responses at sites for which the liable parties lack sufficient resources or cannot be found.

Liability under CERCLA is strict, meaning that care or negligence is not at issue. In particular, a party cannot escape Superfund liability by showing that its waste disposal practices obeyed all laws and regulations that were in force at the time. Liability is also joint and several, which means that any party can be assessed the total costs for a contaminated site (unless the party can show that its contribution produced a separate, divisible result). Finally, Superfund liability is retroactive, applying to actions that occurred before CERCLA was enacted in December 1980.

In administering the Superfund program, EPA can enforce the liability of PRPs in either of two ways. It can have them perform the necessary cleanup directly, under government supervision, or it can conduct the cleanup through its own contractors and then negotiate or sue to recover its costs after the fact. Projects conducted by the liable parties are called "PRP-lead" or "enforcement-lead"; those initially financed by the government are called "fund-lead." In either case, parties that EPA chooses to pursue may initiate "contribution suits" for reimbursement from their fellow PRPs.

PRP-Lead Cleanups Under EPA's "Enforcement-First" Strategy

Under EPA's "enforcement-first" strategy, adopted in 1989, liable parties have undertaken the large majority of major cleanups at Superfund sites. In each of the past three years, PRPs have conducted 72 percent to 74 percent of the detailed engineering studies ("remedial designs," or RDs) and actual cleanup projects ("remedial actions," or RAs). Over that period, PRPs have also conducted roughly one-half of the site studies called remedial investigations and feasibility studies (RI/FSs) and one-quarter to one-third of the "removal" actions (simpler, less costly cleanup efforts).

CBO calculates that PRP-lead studies and cleanups have supplied the equivalent of \$2 billion per year in additional government spending over the past five years. EPA estimates that the value of PRP work commitments has been close to \$1.4 billion in four of the past five years, with a dip down to \$900 million in 1993. However, the agency's data on fund-lead cleanups indicate that final costs are actually 50 percent higher, using a dollar-weighted average, than its original estimates in the "records of decision" (RODs), which document its choices of cleanup remedies. Actual costs to the PRPs might be somewhat less than \$2 billion. The best available evidence indicates that the private sector may be able to accomplish cleanup work at a 13 percent lower cost than the government, which implies that annual PRP costs

would be \$1.7 billion. In any case, the \$2 billion figure represents the amount of EPA spending avoided.

CBO's calculation assumes that EPA's estimates of PRP work commitments are based on ROD cost estimates and that the tendency of RODs to understate the eventual scope of required cleanup applies to PRP-lead as well as fund-lead projects.¹ As noted above, we continue to check the soundness of those assumptions. In the meantime, many PRP-lead cleanups are preceded by RI/FSs conducted by EPA, and there is no reason to believe that those RI/FSs are any more accurate than the ones that are followed by fund-lead cleanups. Moreover, what limited information is publicly available does not suggest that PRPs are any more successful in estimating the required scope of cleanup work when they conduct RI/FSs themselves. An analysis of 83 public and private cleanups completed by 1989 found that "cleanup mis-estimation is a problem affecting both the private sector and the government equally," holding constant such other factors as the type of contamination and cleanup method.²

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1. The estimates in the RODs for the costs of RD/RA work represent nearly 80 percent of the dollar value of work commitments by PRPs; most of the rest goes to RI/FSs, which have exhibited similar rates of cost growth subsequent to the initial estimates.
 2. B.R. Schroeder and J.B. Hartung, *The HAZRISK Cleanup Report* (draft, Independent Project Analysis, Reston, Va., February 1991), p. 47.

Transaction Costs

In the context of Superfund, transaction costs refer to those costs incurred in assigning, allocating, and disputing responsibility for cleanup rather than in contributing to cleanup itself. Such costs are important because proponents of a liability cutoff date hope to eliminate or greatly reduce them.

Federal transaction costs for Superfund enforcement represent perhaps \$250 million to \$300 million in annual spending--or 15 percent to 18 percent of the 1994 Superfund budget. Estimates of nonfederal transaction costs are highly uncertain. The best available data, however, suggest to CBO that PRPs and insurers may now spend on the order of \$900 million annually, which would represent 32 percent of their total spending. Combined, those figures yield an estimate of 27 percent for the share of total transaction costs in overall Superfund spending.

Federal Costs. Most Superfund transaction costs incurred by the government are easy to identify. The Superfund enforcement budget, roughly \$210 million in 1994, includes the costs of EPA and the Department of Justice for identifying and locating PRPs; recovering the costs of fund-lead projects; negotiating, litigating, and issuing administrative orders for PRP-lead projects; and overseeing PRP-lead RI/FSs. Spending on oversight of PRP-lead RDs and RAs is tracked separately and adds roughly \$40 million in additional costs. The incremental costs that EPA incurs in the

site investigations in order to collect data suitable for litigation also count as transaction costs but are harder to quantify.

Private Costs. Much more uncertainty surrounds the transaction costs that PRPs and insurers incur in such activities as disputing liability, negotiating settlements with EPA, litigating the applicability of insurance policies, and conducting unofficial RI/FSs as a check on EPA's own work. On the basis of the available data, CBO estimates that private transaction costs are currently on the order of \$900 million per year. We derived that figure by assuming that both PRP and insurer costs are a fixed percentage markup on PRP outlays for cleanups, studies, and reimbursements to EPA, and that the markup rates are 20 percent to 25 percent for PRPs (or equivalently, that PRPs spend 17 percent to 20 percent of their total outlays on transaction costs) and 24 percent for insurers. Those markup rates imply that the share of transaction costs in total private-sector spending is 31 percent to 33 percent.

That range of 31 percent to 33 percent is close to the 36 percent cited last year by Lloyd Dixon of RAND on the basis of data from two earlier studies.³ Relative to Dixon's analysis, CBO assumes higher insurer costs, because of differences in the methods used to extrapolate 1989 data, but lower PRP costs.

3. Lloyd S. Dixon, *Fixing Superfund: The Effect of the Proposed Superfund Reform Act of 1994 on Transaction Costs* (Santa Monica, Calif.: RAND, 1994), p. xvi.

Estimates of private transaction costs in the Superfund program must be interpreted with caution. Some high estimates of "average transaction-cost shares" are based on simple firm-by-firm or site-by-site averages that do not take into account the dollars spent in each case. Other estimates are median values rather than true averages. Moreover, because the data are so costly to collect, some of the available studies have used samples that probably do not represent the national whole. Another weakness of many estimates, including CBO's, is their reliance on data from sites that have not completed cleanup. Those data are likely to overstate the ultimate share of transaction costs because many categories of such costs are front-loaded--that is, occurring relatively early in the cleanup process.

An appendix to this testimony discusses the leading studies of private transaction costs in the Superfund program and illustrates the various problems encountered in interpreting the available data.

Fairness Issues

Superfund's liability system has been criticized not only on the grounds that its transaction costs are unacceptably high but also that it is fundamentally unfair. Supporters of the current system argue that fairness is served by making people who contributed to the creation of a contamination problem pay for cleaning it up.

Opponents respond that if the goal is to collect from those who benefited previously, then the turnover of shareholders and employees as well as the wide diffusion by market forces of the original cost savings from looser disposal practices requires a broader financing scheme.

Critics also argue that the retroactive "polluter pays" approach is particularly unfair to the insurance industry, which did not foresee Superfund liabilities when it priced coverage sold in the 1960s and 1970s. They further argue that joint-and-several liability adds uncertainty that is particularly harmful to small businesses and that it encourages major PRPs to engage in unjustified contribution actions against small, innocent parties who lack the resources to defend themselves.

THE EFFECTS OF REPEALING LIABILITY THROUGH 1980 OR 1986

The effects of repealing Superfund liability for legal actions that occurred before a cutoff date would depend on the date chosen and on the incidence and significance of illegal disposal activities at sites on the National Priorities List (NPL). If illegal activity played a minor role, a 1987 cutoff would eliminate nearly all PRP liability and the vast majority of federal and private transaction costs. Indeed, it would turn Superfund almost totally into a public works program. The trade-off would be a loss in cleanup spending that exceeds the program's current EPA budget. The effects of

a 1981 cutoff would be less sweeping, particularly for transaction costs, but they would still be significant. With either cutoff date, higher levels of illegal activities at NPL sites would cut into the reduction in PRP liabilities and significantly reduce--or conceivably reverse--the savings in transaction costs.

Data on the Time Pattern and Legality of PRP Activities

Data from an August 1993 survey by EPA of all of its remedial project managers (RPMs), the regional employees who oversee site cleanup efforts, show that 72 percent of nonfederal sites listed on the NPL have received no wastes since 1986. In addition, the RPMs reported that 14 percent of the sites include post-1986 wastes; they were uncertain about the remaining 14 percent. The survey also asked about the presence of post-1979 (rather than post-1980) wastes. The RPMs reported that 43 percent of nonfederal sites do not include post-1979 wastes, 48 percent do, and 9 percent may or may not.⁴

The survey did not explore the time distribution of wastes at the sites whose dates of operation straddle either of the cutoff dates. EPA is collecting that information from its regional offices; at present, however, the agency has analyzed

4. In calculating percentages from the survey data, CBO excluded not only the federally owned sites but also 84 so-called orphan sites. Those sites have no PRPs that are financially viable and therefore must rely on the trust fund to pay for cleanup.

data from only 15 such sites. In that limited sample, 59 percent of the waste volume dates from 1981 or later and just 1 percent from 1987 or later.

Even if those data are reasonably accurate for existing NPL sites, one might wonder about their applicability to future sites. CBO believes that sites added to the NPL in the rest of the decade will be similar to current sites in the time profile of their wastes and therefore would be similarly affected by the liability cutoff dates. All or nearly all of those sites will be drawn from the set of contamination problems already being investigated by EPA, most of which were created some years ago. Beyond this decade, compliance with regulations of the Resource Conservation and Recovery Act and increased vigilance prompted by CERCLA are likely to keep the number of newly created Superfund sites relatively small, although such sites may increase as a percentage of new NPL additions.

Less information is available on the contribution of illegal activities--for example, permit violations or midnight dumping--to Superfund contamination problems. The existing data shed light on the percentage of sites where illegal activities are a factor but not on the average share of the illegal contributions at those sites. Moreover, the available site-level estimates vary widely--from 10 percent to 35 percent or even 53 percent--perhaps in part because of differences in definitions.

The lower estimate of 10 percent comes from researchers at Resources for the Future, who reviewed the descriptions of nonfederal NPL sites in EPA's "state books" and found that illegal activity "was the cause of contamination" at 10 percent of the sites.⁵ The 35 percent and 53 percent figures come from EPA's 1993 survey, which asked RPMs, "In your opinion, were site activities that caused the contamination illegal at the time?" The RPMs responded "definitely yes" for 16 percent of the nonfederal sites and "probably yes" for 19 percent, making a total of 35 percent. The RPMs were "uncertain" about another 18 percent of the sites, and further investigation might show that many of those sites also involved illegal activity.

The explanation for the wide range of the estimates may be that 10 percent is a better estimate of the fraction of sites for which illegal activity was the sole or dominant cause of contamination, whereas 35 percent to 53 percent is a better range for the fraction of sites with illegal contributions to the contamination problem. That hypothesis cannot be confirmed at present.

5. Katherine N. Probst and Paul R. Portney, *Assigning Liability for Superfund Cleanups: An Analysis of Policy Options* (Washington, D.C.: Resources for the Future, 1992), p. 53. The estimate of 7 percent used in a more recent study by Probst, Portney, and two coauthors differs because it excludes sites with only a single PRP (personal communication by Katherine N. Probst, April 11, 1995).

Implications of the Data for PRP Liabilities

Given the uncertainty surrounding how much Superfund contamination arises from illegal activity, CBO analyzed scenarios in which such activity was a factor at 10 percent and 35 percent of nonfederal NPL sites, although the actual percentage could lie above or below that range. Exempting legal activities through 1986 would reduce PRP cleanup liabilities by an estimated 95 percent if illegal contributions occurred at 10 percent of the sites. Using CBO's estimate for current PRP cleanup spending of roughly \$1.7 billion per year, that 95 percent reduction translates to a dollar figure of about \$1.6 billion annually (see Table 1). With the same cutoff date but illegal activity at 35 percent of sites, the estimated reduction in cleanup liability is 80 percent to 90 percent, or \$1.4 billion to \$1.5 billion. A 1981 liability cutoff yields estimated reductions of 70 percent (\$1.2 billion) if illegal actions were a factor at 10 percent of sites, and 60 percent to 70 percent (\$1.0 billion to \$1.2 billion) if they occurred at 35 percent of sites.

Those figures derive in part from CBO estimates that roughly 95 percent of all waste volume at nonfederal NPL sites predates 1987 and 70 percent predates 1981. The 1987 estimate is based on the 72 percent of sites that entirely stopped their waste operations before 1987 (as shown in the RPM data) and an assumed 80 percent share of pre-1987 wastes at sites that straddle the cutoff (less than the 99 percent seen in EPA's limited sample of 15 sites). The 70 percent figure for 1981 is based on linear

extrapolation between the RPM survey data for 1980 and 1987 (which suggests that 48 percent of sites have only pre-1981 wastes) and on a 41 percent share of such wastes at the other 52 percent of sites, as observed in the 15 straddle sites analyzed by EPA.

TABLE 1. ESTIMATED ANNUAL EFFECTS OF SUPERFUND LIABILITY CUTOFFS

	1987 Cutoff				1981 Cutoff			
	Illegal Activities at 10 Percent of Sites		Illegal Activities at 35 Percent of Sites		Illegal Activities at 10 Percent of Sites		Illegal Activities at 35 Percent of Sites	
	In Millions		In Millions		In Millions		In Millions	
	In Percent	of Dollars	In Percent	of Dollars	In Percent	of Dollars	In Percent	of Dollars
Reduction in PRP Liability ^a	95	1,600	80 to 90	1,400 to 1,500	70	1,200	60 to 70	1,000 to 1,200
Reduction in Federal Enforcement Costs	90	250	45 to 55	125 to 150	25 to 35	70 to 100	10 to 25	30 to 70
Reduction in Private Transaction Costs	90	800	60 to 70	550 to 625	45 to 55	400 to 500	20 to 40	200 to 350
Funding Gap ^b	n.a.	1,600	n.a.	1,450 to 1,600	n.a.	1,300	n.a.	1,100 to 1,300

SOURCE: Congressional Budget Office.

NOTES: PRP = potentially responsible party; n.a. = not applicable.

Dollar estimates for reductions in PRP liability, federal enforcement costs, and private transaction costs are rounded, based on the estimated percentage reductions.

a. Assumes that PRP cleanups cost 13 percent less than those done by the Environmental Protection Agency and that EPA's records of decision underestimate actual cleanup requirements by an average of one-third.

b. Net of savings in federal enforcement costs.

The percentage of waste disposal before a cutoff date is not the end of the story, however, under proposals that retain liability for actions that were illegal at the time they occurred (hence the need for assumptions about the prevalence of illegal contributions at Superfund sites). In keeping with the general thrust of the reform proposals to reduce transaction costs and private-sector burdens perceived as unfair, the analysis assumes that PRPs held responsible for illegal actions would be subject to some kind of proportional liability based on their contributions to the contamination problems at their sites rather than to joint-and-several liability.⁶

In the case of a 1987 cutoff and relatively few sites with illegal activity, CBO assumes that EPA would choose to dismantle most of Superfund's enforcement program, leaving enough resources to identify and pursue only the most egregious illegal pre-cutoff polluters and any sufficiently major post-cutoff PRPs. Under that scenario, PRP liabilities would fall by essentially the same proportion as the percentage of wastes released before 1987--namely, 95 percent.

Because the other cases would leave many more parties subject to Superfund liability, CBO assumes that EPA would have to maintain a sizable enforcement program and would regularly attempt to enforce the liability of PRPs whose pre-cutoff activities were illegal. The impact of such enforcement efforts on PRP

6. A proportional liability scheme that maintains the current classes of PRPs faces the question of the relative responsibility of site owners and operators compared with off-site waste generators and transporters. Specific legislative guidance on the allocation of responsibility between on- and off-site parties would help keep transaction costs down but might lead to unfair results in particular cases.

liabilities would depend on the average shares of the illegal waste contributions and on EPA's success rate in tracking down the illegal polluters and getting money or work commitments from them.

Lacking hard data on those factors, CBO used a range of reasonably low and high estimates. For the case with illegal activity at 10 percent of the sites, the analysis assumed a range of 60 percent to 80 percent as the illegal share on the theory that those sites represented the "hard core" in which illegal activity was the sole or dominant cause of contamination. For the cases in which illegal activity took place at 35 percent of sites, the assumed range for the average illegal share was 30 percent to 70 percent. In all cases, the success rate of EPA's enforcement efforts was assumed to lie between 25 percent and 75 percent. Combining those assumptions, plus data indicating that sites with illegal activity cost an average of 5 percent less to clean up, yielded the estimated reductions in PRP liability (see Table 1).

Effects on Transaction Costs

In the most favorable scenario—a 1987 cutoff and relatively little illegal activity—CBO estimates that federal enforcement costs would drop by 90 percent. Alternatively, given a 1981 cutoff and illegal activity at 35 percent of the sites, the estimated reduction in enforcement costs would be only 10 percent to 25 percent. Those

savings are less than proportional to the reductions in PRP liabilities in all cases and substantially less in three of the four. The range of savings in private transaction costs would run from 90 percent at the high end to 20 percent to 40 percent at the low end. Those costs would also fall less sharply than cleanup liabilities, although more than federal enforcement costs. All of those estimates represent judgments by CBO based on qualitative considerations. The precise numerical figures are necessarily somewhat speculative. Higher levels of illegal activity at NPL sites than those assumed here could cause federal and private transaction costs to rise rather than fall.

The estimates of savings on enforcement assume that federal costs fall as sites are removed entirely from the liability system but that the costs do not decline with reductions in the number of PRPs at the remaining sites, where EPA continues to enforce liability for cleanup. CBO also assumes that a significant enforcement program incurs some fixed costs annually, such as the costs of ensuring that all site sampling data are of litigation quality in case they are subsequently needed for enforcement purposes. Hence, for example, with an estimated 70 percent of waste volume dating before 1981 but just 48 percent of sites having only pre-1981 wastes, CBO expects that enforcement savings from a 1981 cutoff would not exceed 40 percent, even without questions about the legality of disposal activities. Finally, the estimates assume that illegality of PRP actions would be costly for the government to identify--partly because of the variation in state and local laws--and prove to the satisfaction of PRPs or the courts.

